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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/525,159	06/05/2007	Hiroyuki Ichiba	GUA-UTO-331	3245

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THE GATES CORPORATION
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1551 WEWATTA STREET
DENVER, CO 80202

EXAMINER

NGUYEN, VU Q

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3657

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/525,159	Applicant(s) ICHIBA, HIROYUKI	
	Examiner VU Q. NGUYEN	Art Unit 3657	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 November 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3.5-7,10-12 and 16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3.5-7,10-12 and 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/30/2010 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3 and 5-7 rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent Document JP 5-248496 (JP '496) in view of European Patent Document EP 0767509 (EP '509).

Regarding claim 6, JP '496 discloses a transmission belt (11) comprising: a contact face (14b) contacting with a pulley (7, 8, 9 or 10) when said transmission belt is wound around said pulley (see Fig. 1), and a piece of foreign matter (16) embedded near said contact face and at a distance (d) from said contact face in said transmission

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belt (see Fig. 2); wherein a plurality of pieces of said foreign matter (16) are embedded in said transmission belt (see Fig. 2), such that upon said contact face being worn by said pulley when said transmission belt rotates around said pulley, then said foreign matter is exposed at said contact face so as to warn of a decrease in the transmission power of said transmission belt on said pulley, wherein said foreign matter contacting said pulley makes a warning sound to warn of a decrease in the transmission power (see the English abstract).

Regarding claim 6, JP '496 does not disclose expressly that said piece of foreign matter has a longitudinal direction and said longitudinal direction of said foreign matter is substantially in the direction perpendicular to said contact face; each said piece having a longitudinal direction and a top, and said longitudinal direction substantially in the direction perpendicular to said contact face and with said top closest to said contact face; and a distance in the perpendicular direction between said contact face and the top of at least one piece of said foreign matter being different from a distance in the perpendicular direction between said contact face and the top of another piece of said foreign matter; the warning sound becoming louder as said contact face becomes more worn.

EP '509 teaches in Fig. 7, a wear indicator comprising a plurality of pieces of foreign matter (20, 21, 22), each said piece having a conical shape with a longitudinal direction (axis of cone) and a top (apex of cone), said longitudinal direction substantially in the direction perpendicular to a contact face (outer face/surface of element 19) and with said top closest to said contact face (see Fig. 7); and a distance in the

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perpendicular direction between said contact face and the top of at least one piece of said foreign matter being different from a distance in the perpendicular direction between said contact face and the top of another piece of said foreign matter (see the 6th to last paragraph of the English machine translation disclosing that the plurality of pieces of foreign matter can have different lengths).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the plurality of pieces of foreign matter as taught by JP '496 to have a conical shape oriented in a manner as taught by EP '509. The motivation for doing so would have been to provide greater, more versatile wear indication by providing different degrees of wear indication, due to the conical shape of the foreign matter. Furthermore, it would have been obvious to modify the plurality of pieces of foreign matter to have different lengths as taught by EP '509, as a means of further providing different degrees of wear indication at different locations/depths, thereby allowing for even more versatile and robust wear indication. In doing so, the Examiner submits that the warning sound as taught by JP '496 would necessarily become louder as the contact face becomes more worn, due to the plurality of pieces of foreign matter having a conical shape and/or different lengths.

Regarding claim 3, JP '496 does not disclose expressly that said foreign matter is softer than said pulley. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify either the foreign matter or the pulley as taught by JP '496 so that the foreign matter is softer than the pulley. The motivation for doing so would have been to merely provide a suitable, alternative material based on

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various design factors such as cost, availability, and manufacturability. The Examiner submits that material selection is a routine practice performed by those of ordinary skill in the art, and it is well-known to those of ordinary skill in the art that, relatively speaking, softer materials do not scratch or damage harder materials. The Examiner submits that prevention of damage to parts is obviously desirable to those of ordinary skill in the art.

Regarding claim 5, see EP '509 and Fig. 7.

Regarding claim 7, JP '496 does not disclose expressly that said pieces of foreign matter are given a color, which is different from a color of other parts of said transmission belt.

EP '509 further teaches that the pieces of foreign matter can be given a color, which is different from a color of other parts (see the 6th to last and 5th to last paragraphs of the English machine translation).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to further modify the pieces of foreign matter as taught by JP '496 to be given a color different from other parts as taught by EP '509. The motivation for doing so would have been merely to further provide an additional, visual indication of wear that can be easily implemented, thereby allowing for more versatile and robust wear indication.

Claims 10-12 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent Document JP 5-248496 (JP '496) in view of European Patent

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Document EP 0767509 (EP '509) as applied to claims 3 and 5-7 above, and further in view of Japanese Patent Document JP 6-281517 (JP '517).

JP '496, as modified by EP '509, is relied upon as set forth above.

Regarding claim 10, JP '496 does not disclose expressly a sound sensor, which detects said specific sound (said warning sound), set up near where said transmission belt contacts said pulley; and a warning apparatus which sends out a warning according to the volume or sound pressure of said specific sound detected by said sound sensor.

JP '517 teaches a sound sensor (3), which detects a specific sound, set up near where a transmission belt (2) contacts a pulley (1a or 1b); and a warning apparatus (201, 206) which sends out a warning (as broadly recited) according to the volume or sound pressure (inherent) of said specific sound detected by said sound sensor.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the apparatus as taught by JP '496 to include a sound sensor and a warning apparatus as taught by JP '517. The motivation for doing so would have been to merely provide a more versatile, robust system of wear indication that further ensures that any need to replace the transmission belt is known.

Regarding claim 11, the Examiner submits that rotation of the transmission belt 11 of JP '496 at any given speed will inherently cause the foreign matter 16 to contact the pulley at some cycle depending on its location, and thus make the specific sound appear at that cycle, as broadly recited.

Regarding claim 12, the Examiner submits that the combination as set forth above would result in structure at least capable of meeting the functional/intended use limitation of the claim, as broadly recited.

Regarding claim 16, see Fig. 7 of EP '509.

Response to Arguments

Applicant's arguments filed 11/30/2010 have been fully considered but they are not persuasive.

Applicant argues that JP '496 lacks each piece of foreign matter having a top that is closest to the contact face. The Examiner submits that such argument is rendered moot, since the proposed modification of the pieces of foreign matter to have a conical shape oriented in a manner as taught by EP '509 would result in each piece of foreign matter clearly having a top that is closest to the contact face. Please see the modified rejection above.

Applicant further argues that the different colors and lengths of the foreign matter in EP '509 are features associated only with the first embodiment shown in Figs. 1-5 and not with the second embodiment shown in Figs. 6-7. The Examiner disagrees. The 6th to last paragraph of the English machine translation of EP '509 discloses the above-mentioned features as "an alternative to the invention." Thus, Applicant's assertion that such features are only associated with the first embodiment appear to be without factual basis, and thus, Applicant may be interpreting EP '509 too narrowly. The Examiner submits that such features are not clearly tied to the first embodiment or the

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second embodiment, which suggests that such features can be applied to either embodiment. The use of a different color being disclosed with reference to the second embodiment in the 5th to last paragraph, as well as the interchangeability between cylindrical and conical pieces of foreign matter disclosed in the 4th to last paragraph, appear to support the Examiner's conclusion that features can be applied across all embodiments. At the very least, the features of different colors and lengths is clearly taught and/or suggested by EP '509, and the Examiner submits that there is no reason why such features cannot be applied to the second embodiment. Nowhere does EP '509 teach away from, discredit, or discourage applying such features to the second embodiment. The Examiner submits that combining such features with the second embodiment could only further enhance wear indication and provide nothing but predictable results.

For at least these reasons, the Examiner maintains the rejection of the claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to VU Q. NGUYEN whose telephone number is (571)272-7921. The examiner can normally be reached on Monday through Friday, 11:30 AM to 8:00 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Siconolfi can be reached on (571) 272-7124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/V. Q. N./
Examiner, Art Unit 3657

/Robert A. Siconolfi/
Supervisory Patent Examiner, Art
Unit 3657